

REMARKS35 U.S.C. 103(a) Rejection of Claims

Claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Olafsson (U.S. Pat. 6,163,570).

Applicants respectfully assert that the claims as pending before this amendment were allowable over the prior art of record. Also, Applicants have added new claims 21-22. Reconsideration is respectfully requested.

The arguments from Applicants' Appeal Brief dated March 28, 2002 are all still applicable to the current rejection. The arguments related to Olafsson from Applicants' Response dated 12/31/02 are all still applicable to the current rejection. In the present office action, the Examiner uses Olafsson in the rejections of all of the claims under 35 U.S.C. 103(a).

Appellants agree with the Examiner that Olafsson does not teach the detecting or measuring required by the independent claims. Applicants respectfully draw the Examiner's attention to the express language of the claims. Regarding claims 1 and 10, Olafsson does NOT disclose "detecting the transmit power level of the analog modem"; regarding claim 12, Olafsson does NOT disclose "using a **measured** transmit power level of at least one of the analog modem and the digital modem as a parameter in designing a constellation"; and regarding claim 17, Olafsson does NOT disclose "an analog modem which **measures** a transmit power of the analog modem for the initial constellation" (emphasis added). Olafsson discloses a method which "verifies the first computed total transmit power by calculating, in accordance with the predetermined power calculation formula, a second computed transmit power of the signal point constellations" (Olafsson, col. 11, lines 4-7. emphasis added).

Olafsson is NOT concerned with the actual transmit power levels at all. Olafsson does not detect, sense, or measure the actual transmit power. Rather, Olafsson tries to verify computational accuracy. Specifically, Olafsson teaches verifying a first remotely performed calculation against a second locally performed calculation. Thus the comparing taught in Olafsson is between two calculated values. Olafsson teaches a significantly inferior approach. Olafsson does not suggest the present invention, but in fact teaches away from the present invention by teaching a trail and error approach.

Appellants agree with the Examiner that Olafsson does not explicitly teach the "adjusting" or "using/uses" required by the independent claims. Again, Applicants respectfully draw the Examiner's attention to the express language of the claims. Regarding claims 1 and 10, Olafsson does NOT disclose "adjusting the transmit power level ... in accordance with the difference between the **detected** transmit power level ... and a desired transmit power level"; regarding claim 12, Olafsson does NOT teach "using a **measured** transmit power level of at least one of the analog modem and the digital modem as a parameter in designing a constellation"; and regarding claim 17, Olafsson does NOT disclose "wherein the digital modem uses the information relating to the transmit power of the analog modem for the initial constellation to determine whether to modify the initial constellation".

Olafsson does not teach adjusting transmit power levels based on actual measured or detected power levels. Instead, Olafsson tries to verify calculated power estimates. Specifically, Olafsson teaches verifying a first remotely performed calculation against a second locally performed calculation. Thus the comparing taught in Olafsson is between two calculated values. Olafsson teaches a significantly inferior approach. Olafsson does not suggest the present invention, but in fact teaches away from the present invention by teaching a trial and error approach. Again, the claimed invention can make a direct adjustment here because the actual transmit power level of the modem was detected; unlike Olafsson, which relies on a potentially less trustworthy computational estimate for the transmit power level.

In addition, regarding claims 1 and 10, Olafsson does not teach that the detecting and adjusting are performed during the design of a constellation. The Examiner has cited FIGs. 1 and 4 of Olafsson as teaching this. Applicants respectfully but strongly disagree. FIG. 1 of Olafsson has no bearing on this concept except as background to FIG. 4. FIG. 4 contradicts the Examiner's statement. Olafsson teaches design of a constellation in step 408. Olafsson neither detects nor adjusts the transmit power level during step 408. Instead, Olafsson verifies the calculation of transmit power (step 414) and either accepts or rejects the constellation accordingly (steps 416, 418, 420). So Olafsson neither detects nor adjusts. And, Olafsson's verification of the calculation of transmit power occurs after constellation design, not during constellation design.

Appellants respectfully note that the technique taught in Olafsson, which requires computing an estimated power of the proposed constellation in advance, is sufficient for the V.90 standard, but cannot be used for the V.92 standard. The reason being that for the V.92 standard, it is impractical to compute in advance what the transmit power will be for a proposed constellation, number of equivalence classes, and precoding coefficients because there is no known method that is accurate enough. Rather, for the V.92 standard, the encoding structure must be implemented and the resulting output power detected over a period of time. The present invention, unlike Olafsson, can be used for the V.92 standard. This is a significant advantage of the present invention over Olafsson.

Thus, Olafsson does not teach any of the steps of independent claims 1, 10 or 12. Olafsson does not teach any portion of independent claim 17.

Applicants respectfully assert that the dependent claims add further limitations to independent claims and are allowable for at least the same reasons as described herein.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

Applicant believes the application is in condition for allowance which action is respectfully solicited. Please contact me if there are any issues regarding this communication or the current Application.

Respectfully submitted,

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